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## **Changing PET/CT manifestation of neurolymphomatosis**

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## Changing PET/CT manifestation of neurolymphomatosis

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Neurolymphomatosis (NL) is a rare manifestation of lymphoma [1]. CT and MRI have been used to detect NL, to stage the extent of the nerve involvement and to guide biopsy. Recent reports have demonstrated the value of FDG-PET/CT in patients with NL [2–4]. Here we present the FDG-PET/CT imaging follow-up of a 56-year-old patient with diffuse large B-cell lymphoma initially presenting as stage IE involving the urinary bladder and presacral area. After six cycles of chemotherapy and pelvic radiation therapy, a complete response was documented. However, there was relapse of the lymphoma, restricted to neural structures. In **a–c** the PET/CT images demonstrate increased FDG uptake in the cranial nerves, delineated on fused axial images [**b**, gasserian ganglion of the trigeminal nerve (*arrows*) and **c** the cervical and lumbar nerve roots (*arrows*)]. The patient was treated with high-dose methotrexate and subsequent radiation therapy. Six weeks after the end of radiation therapy, progressive NL (**d–f**) in the brachial (**e**, *arrows*) and lumbosacral plexus (**f**, *arrows*) was observed.

Because in NL nerve biopsies may fail and MRI may not be sufficiently sensitive to show the entire extent of nerve involvement, FDG-PET/CT with whole-body imaging and exact anatomical correlation is useful in staging, biopsy guidance, treatment planning and therapy assessment [5].

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